

FESTSALEN MUNCH

TECHNICAL SPECIFICATIONS - LAST UPDATED July 2024



TECHNICAL CONTACTS

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CONTENT

ROOM DIMENSIONS	3
STAGE:	4
BLEACHERS:	4
SOUND:.....	5
WIRELESS SYSTEM:	5
PROJECTION/AV:	6
LIGHTS:	6
HOUSE POWER:	6
RIGGING:.....	7
FLOATING KITS:.....	9
MONITORS:.....	9
Mics/DIS:	9
ADDITIONAL LIGHTS.....	10
WIRELESS SYSTEM	10
DJ EQUIPMENT:	10
VIDEO /RECORDING.....	11
PA SYSTEMS.....	11
RIGG.....	11
GRAND PIANO	11
SCREENS	11
ACOUSTICS.....	12
Configuration 1, conference setup with chairs	12
Configuration 2, stage on long wall.....	12
Configuration 3, Acoustics empty hall.....	13
Configuration 4, telescopic bleacher	14

ROOM DIMENSIONS

L= 276,7m
W=12,6-15,3 m
H=8,6 m

The room with full height has the following dimensions:
length 26.7 m; width between 12.6-15.3 m; height 8.6 m.

This gives an area of around 370 m² and a volume of about 3000 m³

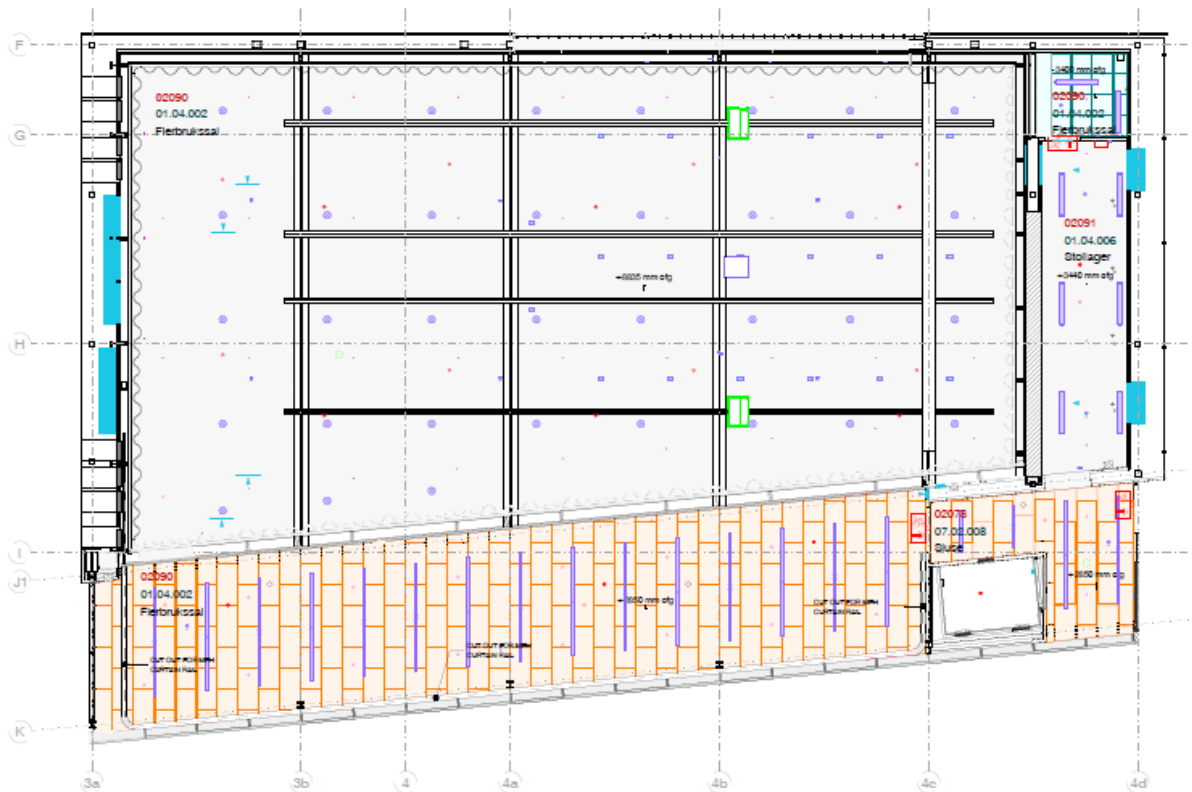


Figure 1: Floorplan of Festalen

STAGE

Scalable Nivtec system.
 30 x Nivtec modules 2x1 m
 8 x Nivtec modules 1x0,5m
 Legs: 20cm, 40cm and 60 cm
 All necessary railing

Standard stage size:
 Width: 10m
 Depth: 5m
 Height: 0,6m

No sidestage!

BLEACHERS

Festsalen has automated bleachers with 260 seats. FOH is rigged on top level.
 See attachment for details.

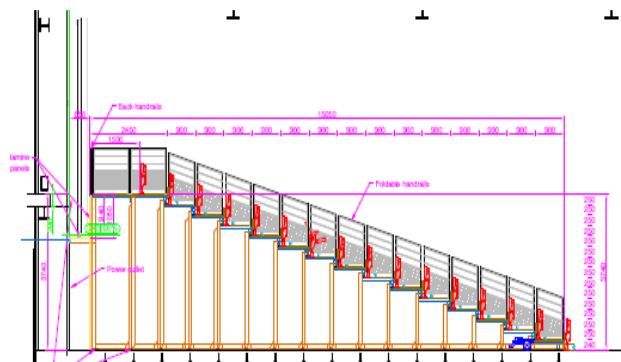


Figure 2: Side view Bleachers

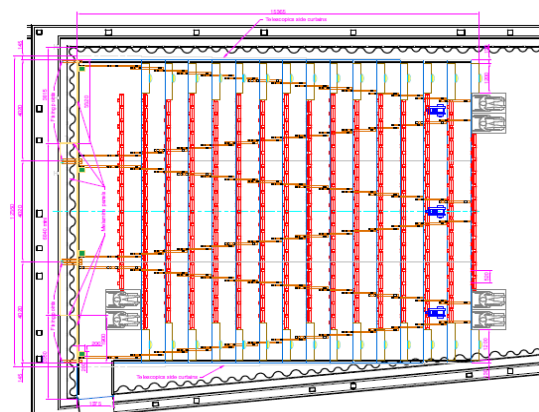


Figure 3: Top view Bleachers

SOUND

PA SYSTEM

Tops: 10x Meyer Lina pr side
Subs: 6x Meyer LFC 750, flown mono endfire
Front fill: 2x Meyer x40 pr side

FOH:

Alt1: Allen & Heath Dlive S5000
Alt2: Allen & Heath Dlive S2500
Alt3: Allen & Heath Dlive C1500

Stagerack:

Allen & Heath CDM 64 (64 in, 31 out)
4x A&H DX 168 (16 in, 8 out)

External FX:

2x Bricasti M7

WIRELESS SYSTEM:

Shure Axient, 8 ch
8x ADX 1m bodypack
8 x countryman headsetmics
4x SM 58 WL
4X KMS9 WL

Sennheiser, 2ch:

2 ch Sennheiser WL
2x Headset mics
2x HH mics

Recording:

We can provide different versions of recording.
Please contact head of sound for further details and agreements

PROJECTION/AV

Projector 1 (Short side / stage end)

Panasonic RQ-22, HD projector

Screen size: 7 X 4 meters

Format: 16:10

Projector 2 (Long side)

Screen size: Panasonic RQ-22, HD projector

Screen size: 487 X 304 cm

Format: 16:10

HD BASE-T, Connection HDMI available at FOH, stage and in every patch around the room

LIGHTS

OPERATION

1x GrandMA3 light

LUMINEERS:

Martin	
aura XB	26
Martin encore (stage)	8
Martin encore (front)	5
XLED	
Ledbar	8
Okero dimmer channels	60
Nodes:	
MA2 port node	10

HAZE:

MDG ATMe HAZE w/MDG FAN

HOUSE POWER

DELTA-system 400V/50Hz (red); 3 phases + ground, - but no neutral.
230V between the three phases. 130V between phases and earth.

Available connectors:

2x 32 A , 400 V

2x 63 A, 400V

RIGGING

All trusses are motorized

Truss 1-3 moveable both horizontally and vertically. SWL = 300kg

Truss 4-11 can be moved vertically SWL = 400kg

See attachment for details

Controller has weightcells for loadmonitoring. Overload will indicate and keep truss from moving.

Motors: Liftket 030/22mb -250 kg

Truss: Milos 2KH-40 -M390K, pipe Ø048,4 X 4,47mm, length 9,5m

Class: UC1 - SIS standard

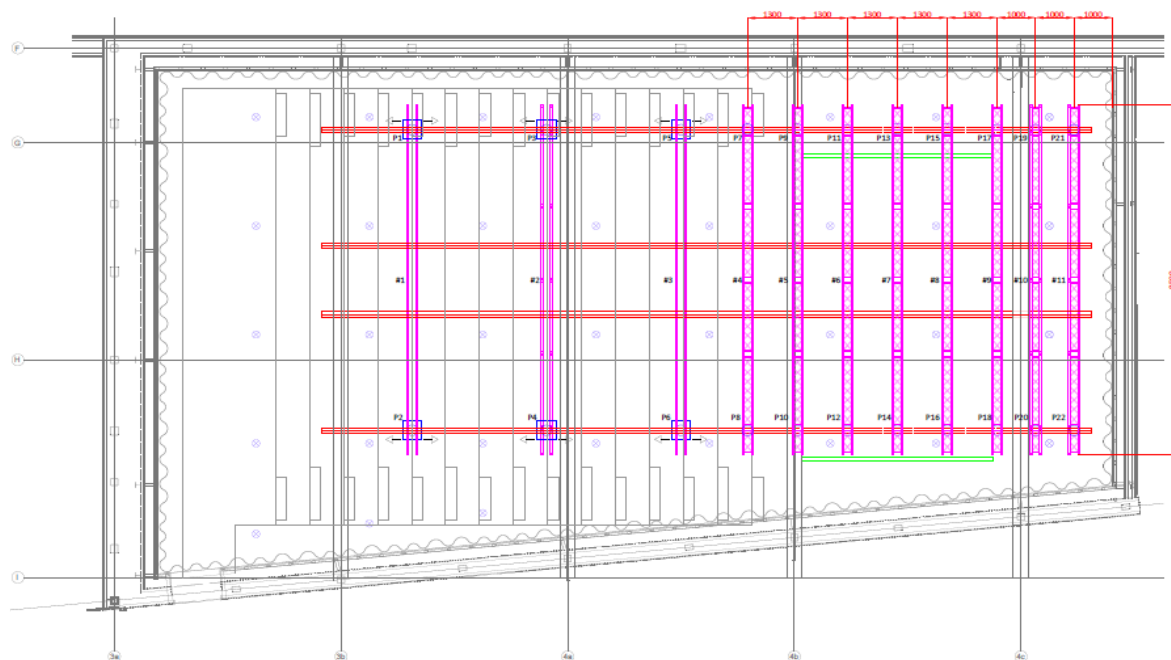


Figure 4: Trusses Festsalen

See weight distribution chart bellow

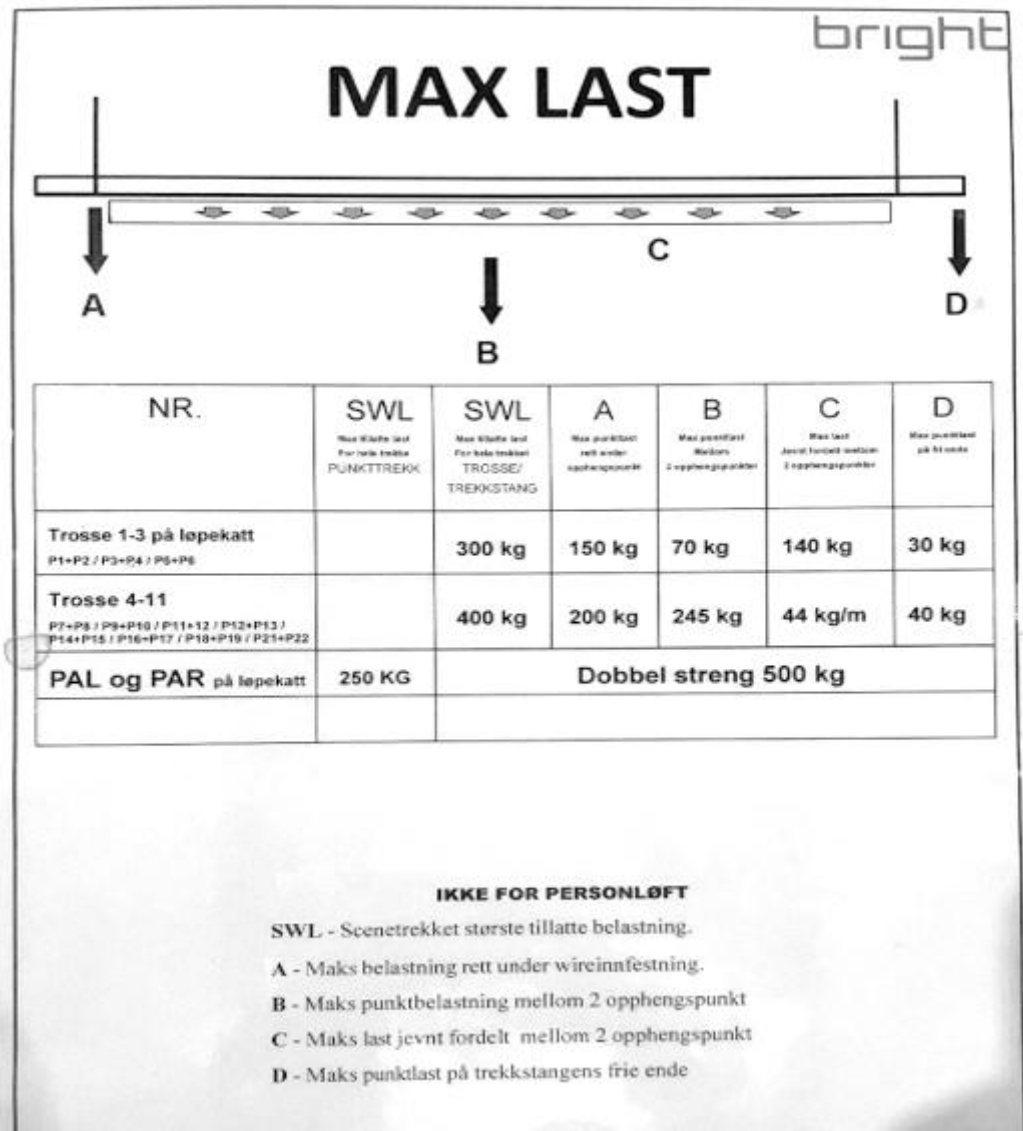


Figure 5 Weight distribution chart

Directly under suspension _____ 150 kg
 Point load between 2 suspensions _____ 70 kg
 Evenly distributed load btwn 2 suspensions ____ 140 kg
 Point load free end load carrier _____ 30 kg

Please note:

- All equipment/other to be hanged in truss MUST be approved by technical department.
- Please contact technical department regarding all external equipment mounted in truss.

FLOATING KITS

All items are subject to availability.

Contact technical department for solutions and availability.

MONITORS:

8 programs with possibility of adding 8 more

Separate monitor mix available on request.

Wedges:

16x Turbosound TFM 122

Amps:

8x LAB IPD 2400

Mics/DIS:

Shure B91	2
Shure B52	2
Shure SM58	14
Shure SM57	10
Shure KSM44A	2
DPA 2011	10
DPA 4099	10
DPA 6061	4
Audio Technica ATM350	6
Audio Technica AT4050	2
Audio Technica AE3000	2
Audio Technica AT4081	4
Audio Technica AE5400	1
Audio Technica ATM450	1
Audio Technica ATM650	1
Beyerdynamic M 160	4
Beyerdynamic M 88 TG	2
Beyerdynamic M 201 TG	2
Sennheiser MD441-U	2
AKG C411	6
AKG C414 XLS	8
Yamahiko CPS-PF1P Tone Plug model	2
Radial PZ-DI	2

Klark Teknik DN100	24
Electrovoice RE20	1
Telefunken M80	1

ADDITIONAL LIGHTS

All items are subject to availability.

Contact technical department for solutions and availability.

Equipment:	Qty:
Atomic 300 LED	4
Martin Mac aura XB	6
Astera AX1	15
Bright XBAR	8
Bright XLED HD	20
Bright XLED FX	4
HMI 1200W Quartzcolor fresnel	6
Profile Robert Juliat 1000/1200 W 16-35 degrees	8
4Lights LED	4
MDG Atme hazer	1
Astera AX9	16

WIRELESS SYSTEM

Shure Axient, 8 ch
 8x ADX 1m bodypack
 8 x countryman headsetmics
 4x SM 58 WL
 4X KMS9 WL

DJ EQUIPMENT:

1x Pioneer DJM 900 NX
 2x Pioneer CDJ 2000 NX
 2x Pioneer PLX-1000

VIDEO /RECORDING

Equipment for videoproduction, recording and/or stream is available on request.
Please contact technical manager for details on equipment and solutions.

PA SYSTEMS

Type:	Qty:
Meyer X 40 Top	6
Meyer 750 sub Genelec	4

RIGG

4x Manfrotto 087NWB

GRAND PIANO

Steinway D-series 274

SCREENS

Samsung 75" on stand
Samsung 32" stage monitor

ACOUSTICS

Festsalen has variable acoustics which can be adjusted with our motorized, black wool curtains.

Curtains = molton 500gr/m2, 50%fold

Configuration 1, conference setup with chairs

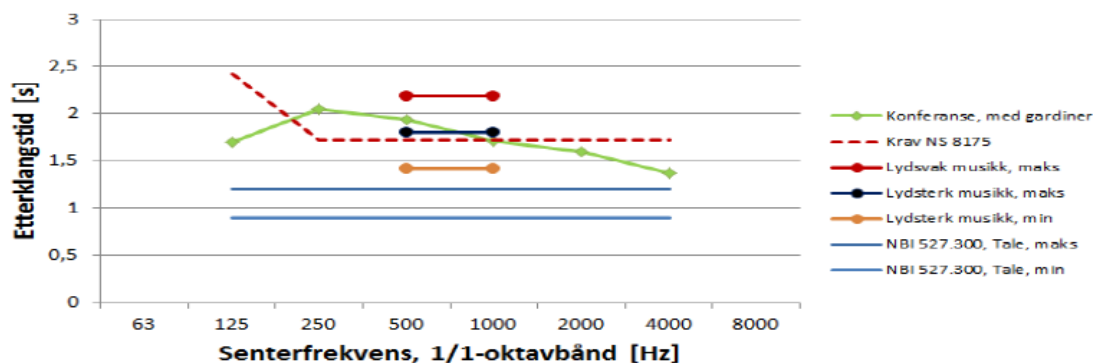


Figure 6: Reverberationtime conference setup with chairs

Configuration 2, stage on long wall

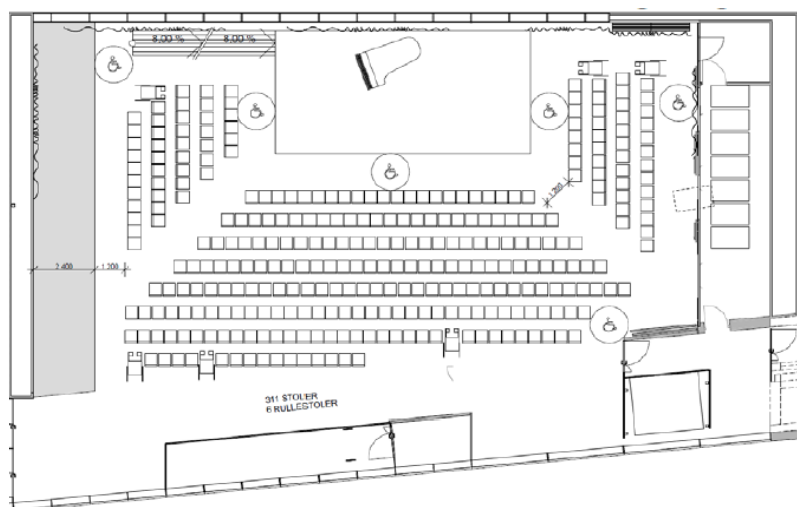


Figure 7: Setup stage on long wall

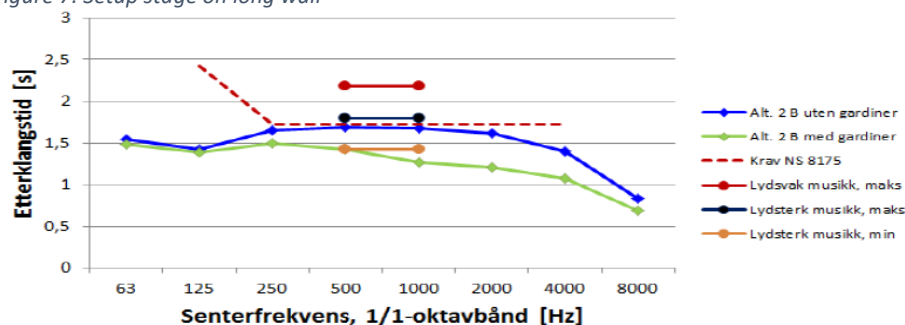


Figure 8: Reverberation time stage on long wall

Configuration 3, Acoustics empty hall

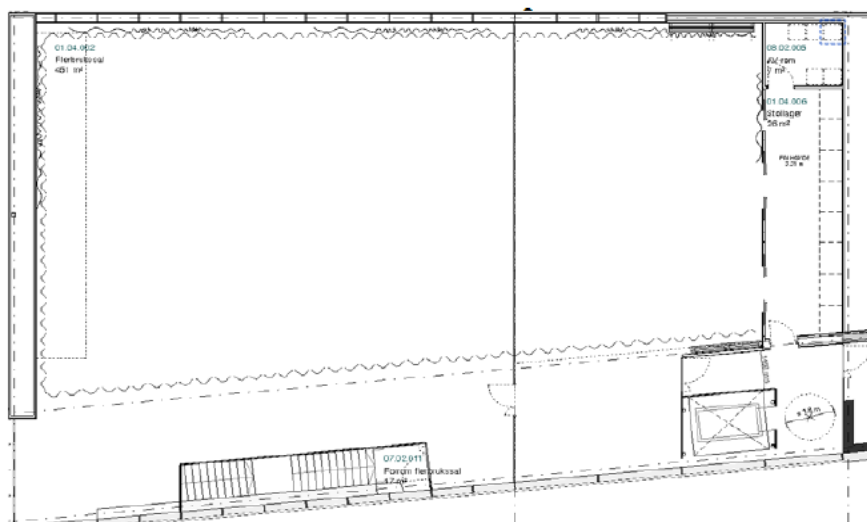


Figure 9: Setup empty room

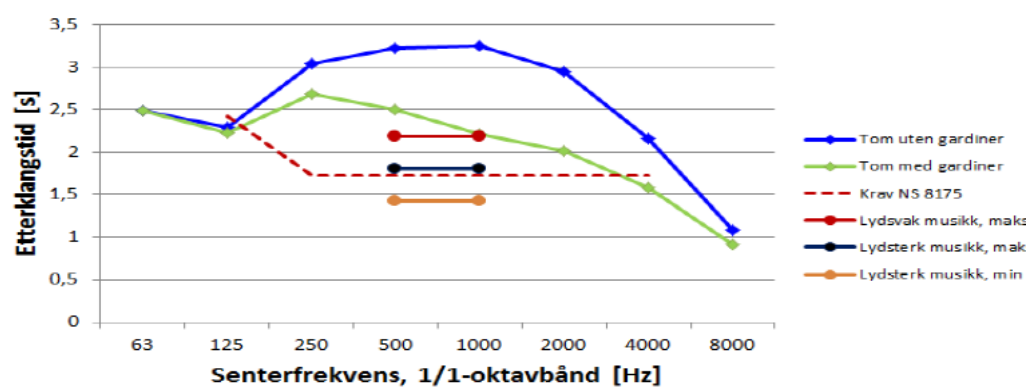


Figure 10: Reverberation time empty room with and without curtains

Configuration 4, telescopic bleacher

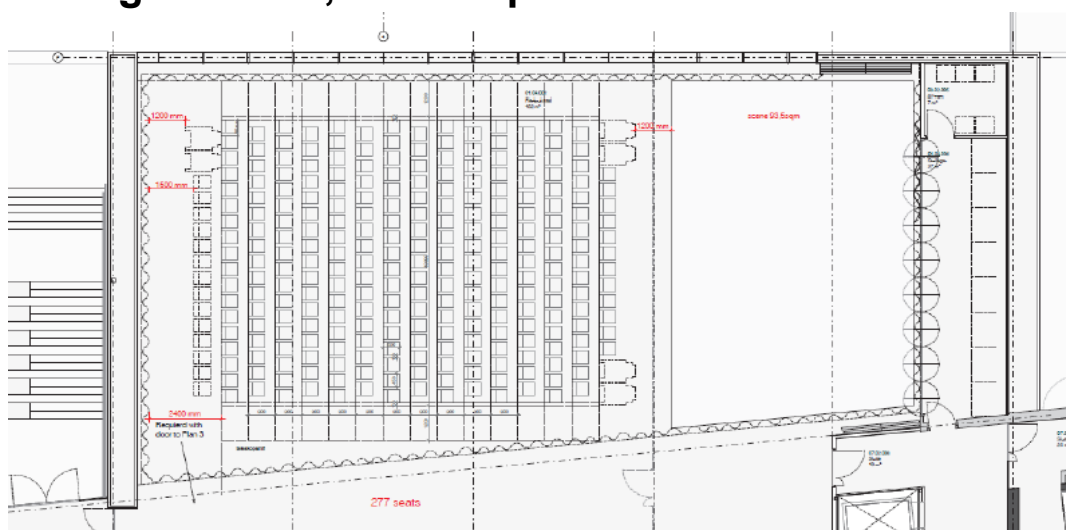


Figure 11: Setup telescopic bleachers

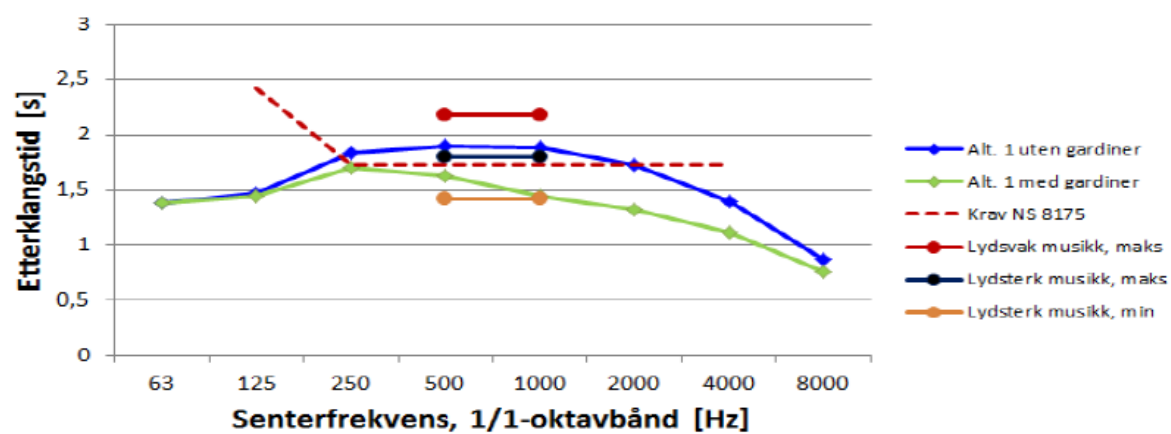


Figure 12: Reverberation time telescopic bleacher